DEPARTMENT of ENVIRONMENTAL SERVICES Water Supply & Pollution Control Division - Biology Bureau

LAKE TROPHIC DATA

MORPHOMETRIC:

Lake: KILTON POND

Town: GRAFTON

Maximum depth (m): 3.1

County: Grafton

River Basin: Merrimack

Latitude: 43°35'12" N

Longitude: 71°58'39" W

Shore configuration: 2.15

Elevation (ft): 850

Shore length (m): 4000

Watershed area (ha): 1813.0

Watershed ponded: 1.0

Lake type: artificial

BIOLOGICAL:	3 February 1994	29 June 1993
DOM. PHYTOPLANKTON (% TOTAL) #1	SYNURA 75%	CHRYSOSPHAERELLA 99%
#2	DINOBRYON 10%	
#3		
PHYTOPLANKTON ABUNDANCE (cells/mL)		575
CHLOROPHYLL-A (µg/L)		3.13
DOM. ZOOPLANKTON (% TOTAL) #1	KELLICOTTIA 61%	KERATELLA 38%
#2	GASTROPUS 14%	POLYARTHRA 16%
#3	CALANOID COPEPOD 12%	BOSMINA 16%
ROTIFERS/LITER	100	144
MICROCRUSTACEA/LITER	24	64
ZOOPLANKTON ABUNDANCE (#/L)	124	223
VASCULAR PLANT ABUNDANCE		Common
SECCHI DISK TRANSPARENCY (m)		2.6 Visible on bottom
BOTTOM DISSOLVED OXYGEN (mg/L)	11.4	7.8
BACTERIA (E. coli, #/100 ml) #1		2
#2		2
#3		

SUMMER THERMAL STRATIFICATION:

not stratified

Depth of thermocline (m): None Hypolimnion volume (m^3) : None Anoxic volume (m^3) : None

CHEMICAL: Lake: KILTON POND Town: GRAFTON						
	3 Febru	uary 1994	29	June	1993	
DEPTH (m)	1.5		1.0			2.0
pH (units)	6.4		7.0			
A.N.C. (Alkalinity)	. 7.1		8.6			
NITRATE NITROGEN	0.12		< 0.02			< 0.02
TOTAL KJELDAHL NITROGEN	0.22		0.37			0.31
TOTAL PHOSPHORUS	0.005		0.012			0.012
CONDUCTIVITY (µmhos/cm)	63.0		75.4			73.0
APPARENT COLOR (cpu)	9		28			28
MAGNESIUM			0.88			
CALCIUM			4.8			
SODIUM			9.2			
POTASSIUM			0.59			
CHLORIDE	9		12			12
SULFATE	7		6			6
TN : TP	68		31			26
CALCITE SATURATION INDEX			2.7			

All results in mg/L unless indicated otherwise

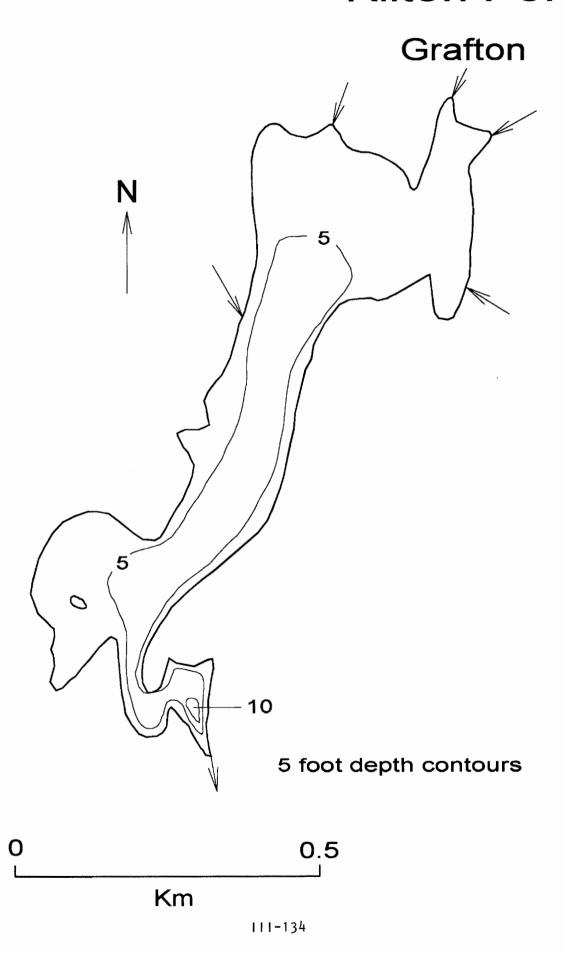
TROPHIC CLASSIFICATION: 1993

D.O.	S.D.	PLANT	CHL	TOTAL	CLASS
**	2	3	0	5	Meso.

COMMENTS:

- 1. This pond was previously surveyed and classified in 1979. It received two additional trophic points in 1993 which were enough to move the pond from an oligotrophic to a mesotrophic rating. There was little change in water quality; the additional points were due to a subjectively perceived increase in plant growth.
- 2. No boat launch; canoe was launched at the dam.
- 3. Town beach was present adjacent to the dam.
- 4. The dominant wholewater phytoplankton were Chrysosphaerella (20%) Cryptomonas (15%) and Tetraëdron (10%).

Kilton Pond



FIELD DATA SHEET

LAKE: KILTON POND

DATE: 06/29/93

TOWN: GRAFTON

WEATHER: SUNNY & BREEZY; HIGH 70'S

	DEPTH (M)	TEMP (°C)	*DISSOLVED OXYGEN	OXYGEN SATURATION
	0.1	24.5	8.1	96 %
	1.0	24.0	8.0	95 %
	2.0	23.5	7.8	90 %
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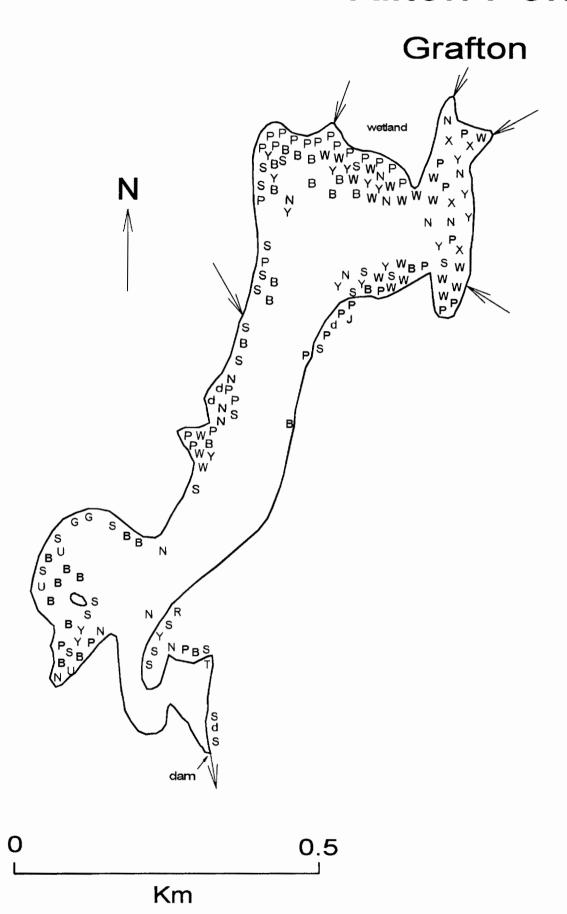
SECCHI DISK (m): 2.6 VOB COMMENTS:

BOTTOM DEPTH (m): 2.6

TIME: 1200

*Dissolved oxygen values are in mg/L

Kilton Pond



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AQUATIC PLANT SURVEY

LAK	E: KILTON POND	TOWN: GRAFTON	DATE: 06/29/93	
Кеу	PLANT	ABUNDANCE		
кеу	GENERIC	COMMON	ABUNDANCE	
S	Sparganium	Bur reed	Scattered	
d	Dulichium arundinaceum	Three-way sedge	Sparse	
В	Brasenia schreberi	Water shield	Scattered	
Т	Typha	Cattail	Sparse	
P	Pontederia cordata	Pickerelweed	Scattered	
N	Nymphaea	White water lily	Scattered	
Y	Nuphar	Yellow water lily	Scattered	
J	Juncus	Rush	Sparse	
W	Potamogeton	Pondweed	Scattered	
X		Sterile thread-like leaf	Common	
G	Gramineae	Grass family	Sparse	
U	Utricularia	Bladderwort	Sparse	
	4.4			
		L	1	

GENERAL OBSERVATIONS:

1. This is a shallow, man-made pond that is conducive to plant growth. The northern end was particularly shallow, and plants were very abundant in this end. Wetlands surrounded the northern end.

OVERALL ABUNDANCE: Common

- 2. The sterile, thread-like leaves and other bottom growth were over much of the bottom, particularly in the northern end; they were more abundant than depicted on the map.
- 3. Saw a loon and about 10 turtles.